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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/682,039	07/12/2001	Brendan J. Kitts	VIGN1130	6148
44654	7590	11/22/2005	EXAMINER	
SPRINKLE IP LAW GROUP 1301 W. 25TH STREET SUITE 408 AUSTIN, TX 78705			GRAYSAY, TAMARA L	
			ART UNIT	PAPER NUMBER
			3623	

DATE MAILED: 11/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/682,039	<b>Applicant(s)</b> KITTS, BRENDAN J.	
	<b>Examiner</b> Tamara L. Graysay	<b>Art Unit</b> 3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19 is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. Claims 1-9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are directed to an abstract idea of modeling an operating parameter.

The claims, to be statutory, must be directed to a practical application. A practical application is a useful, concrete, and tangible result. In the present application, the process claims do not produce a result that is concrete and tangible. The process performs a calculation, i.e., solves a mathematical problem, and nothing more. Therefore, the claims are not directed to a practical application.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thierauf (book, Decision making through operations research).

Generally, in Chapter 1, Thierauf discloses the process of modeling the operating parameters of a business using a computer because of the increased efficiency over manual modeling. In Chapter 11, Thierauf applies the modeling to inventory control which includes demand analysis using various techniques. In Appendix A, (page 609-620, at 609) Thierauf discloses the process of using matrix algebra to help solve linear programming problems in the operations research field of endeavor.

The claims are limited only to the mathematical equations, nothing more, and as such are met by the Thierauf reference insofar as Thierauf discloses using matrices and mathematical processes to aid in decision-making. The examiner takes Official notice that the decision as to what variables of an operation are analyzed is within the level of ordinary skill in the operations research field of endeavor and that the analysis of a particular variable is dependent upon the goal of the operation, including the company as a whole, and the desired outcome of the analysis whether it is determining areas within an operation that need improvement or determining areas that achieve maximization of operation goals.

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The particular categorization (claim 2) is within the level of ordinary skill in the operations research art as evidenced by the types of inventory control presented in Chapter 11 of Thierauf. Moreover, the application of a matrix analysis to any variable including price change and something other than price change (claim 3) is within the purview of a data analyst in the business field, and thus the variable to which matrix algebra is applied is certainly within the level of ordinary skill in the operations research art. The weight of a variable in an operations research matrix analysis (claim 4) is a decision made by one of ordinary skill in the operations research art. Therefore, to use the same matrix (linear equation) to solve a problem as related to different variables is a matter of design choice that is within the level of ordinary skill in the operations research art.

Regarding claims 10-18, the use of computers is noted in Thierauf above. The examiner takes Official notice that the use of readable media having code embodied thereon is common in the computer art. Thus, information and instructions embodied on a readable medium would have been obvious in order to perform the mathematical calculations on a computer or data processing system.

***Allowable Subject Matter***

3. Claim 19 is allowed.

***Response to Arguments***

4. Applicant's arguments filed 09 September 2005 have been fully considered but they are not persuasive.

**Arguments relevant to the 35 U.S.C. 101 rejection**

- In response to the argument on page 10 regarding 35 U.S.C. 101, applicant has not indicated what is the claimed result. Since no result is claimed the claim does not meet the concrete and tangible result test for statutory subject matter that is otherwise nonstatutory. Applicant argues that because the claim 1 process is performed "by a data processing system" it produces a concrete and tangible result. The recitation of the process being performed by a data processing system is not sufficient to render the claim statutory because the claim lacks a practical application that is useful, concrete, and tangible. In particular, the claim lacks a result that is concrete and tangible.
- Further applicant points out that Office personnel are to correlate each claim limitation to all portions of the disclosure that describe the claim limitation, citing MPEP § 2106(II)(C). While this is part of the examination process, the Office personnel are not required to document the correlation step as it relates to each claimed limitation. In the interest of furthering prosecution, an example of the examiner's correlation follows. The only disclosed element that is correlated to the claimed data processing system is the general-purpose computer 10, as depicted in Figure 1 and paragraph [0014] which performs the process of claims 1-9. There are no other specific elements of the disclosed invention that either correlate to or perform the steps of determining, determining, generating, and calculating as set forth in claims 1-9. Thus, as pointed out in the last Office action, the claims are not directed to statutory subject matter because they fail to recite within their scope a concrete, and tangible result.
- Also applicable to the rejection under 35 U.S.C. 101, applicant further argues on page 15 that "manipulating and transforming data through a series of mathematical calculations ... produces a useful, concrete, and tangible result – the operating parameter." In response, the examiner points out that the claim calculates a "parameter" through modeling. The claimed operating parameter is not explicitly defined in the disclosure. [This is supported by the various applications by which the claimed "equation" can be implemented. The various applications are further evidence that applicant is intending to seek patent protection for a mathematical calculation or algorithm and not any particular practical application.] A common meaning of the term "parameter" is a variable value. A variable value alone cannot be concrete and tangible in the sense intended by 35 U.S.C. 101, i.e. a real-world practical application. Applicant has not positively claimed any particular calculation, any particular value, or any particular operation, thus the resulting "operating parameter," fails to overcome the rejection under 35 U.S.C. 101 for two reasons. First, the operating parameter is not concrete and tangible but is instead a variable, i.e., abstract, mathematical calculation value having no particular claimed application. Second, there is no relationship between the operating parameter and the store (as set forth in the preamble).

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**Arguments relevant to the 35 U.S.C. 103 rejection**

- Applicant points out that Office personnel are to correlate each claim limitation to all portions of the disclosure that describe the claim limitation, citing MPEP § 2106(II)(C). While this is part of the examination process, the Office personnel are not required to document the correlation step as it relates to each claimed limitation. In the interest of furthering prosecution, an example of the examiner's correlation follows. The only disclosed element that is correlated to the claimed data processing system is the general-purpose computer 10, as depicted in Figure 1 and paragraph [0014] which performs the process of claims 1-9. There are no other specific elements of the disclosed invention that either correlate to or perform the steps of determining, determining, generating, and calculating as set forth in claims 1-9.
- Applicant requests that the examiner particularly point out the application of the reference to the claimed features. As noted in the rejection under 35 U.S.C. 101 as applied to claims 1-9, the examiner has determined that the claims are limited to mathematical calculations and nothing more and the mathematical calculations do not include a real-world result, i.e., practical application. In response to applicant's request for more details as to how the reference meets the abstract idea set forth in the claims, the examiner notes that Thierauf discloses a step of determining the effect of a variable in the inventory control examples of Chapter 11. Looking to page 343, there are four examples provided that separate or decouple inventories as a method of inventory control. Applying Thierauf to claim 1, for example, in light of the level of ordinary skill in the art
  - determining an effect of a first variable on quantities of a plurality of items sold by a vendor
    - An exemplary premise set forth in Thierauf is: If a shopper expects items to be available and some items are seasonal, then a first variable is the season or time of year which has an effect of the items sold by a vendor.
  - determining which items are significantly affected by the first variable
    - As a practical example, in some climates clothing and accessories are seasonal, so the purchase of cold weather clothing and accessories is significantly affected by the seasons.
  - generating a first matrix that weights items
    - Continuing with the above example, a mathematical calculation is used to determine the demand for cold weather clothing and accessories, based on the season. Other items that are not cold weather items are not given weight when the variable is set to be a cold weather season.
    - Thierauf at Appendix A teaches the mathematical process of linear equations and matrices for evaluating variability.
  - calculating the operating parameter using the matrix
    - the desired cold weather inventory is calculated using the cold weather clothing and accessories that are in demand.

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- In response to applicant's argument with regard to the art rejection of claims 10-18 that the claim is not limited to storing information and instructions on a readable medium, the examiner notes that there was not intent to indicate that the claim included the step of storing, but rather the product or medium in combination with the information embodied on the product or medium (accomplished by embodying / storing the information thereon) would have been obvious to one of ordinary skill in the computer art because Thierauf discloses a computerized system.



***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamara L. Graysay whose telephone number is (571) 272-6728. The examiner can normally be reached on Mon - Fri from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz, can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**SUSANNA M. DIAZ**  
**PRIMARY EXAMINER**

 11/17/05  
Tamara L. Graysay  
Examiner  
Art Unit 3623

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